

REMARKS

As a preliminary, Applicants and Applicants' representative thank the Examiner and her Supervisor for the personal interview which was held on May 23, 2005.

By the present amendment, claims 1 and 8 have been amended to clarify that the shrinkage force is measured on the polarizer alone. Claim 22 has been amended to specify that the polarizer is a single layer film, and to clarify that the shrinkage force is measured on the polarizer alone. Claim 42 has been amended by incorporating therein the subject matter of claim 52, and to clarify that the shrinkage force is measured on the polarizer alone.

Also, claims 49 and 51 have been amended to replace "is made of" by "consists of," and claim 28 has been amended to correct "form" to "from."

Support for the amendments is immediately derived from the original application, for example on page 18, lines 12-22.

In the Office Action, claims 49 and 51 are objected to as duplicative, and claim 28 is objected to for a typographical error.

Claims 49 and 51 have been amended to replace "is made of" by "consists of," and claim 28 has been amended to correct "form" to "from." Accordingly, it is submitted that the objection should be withdrawn.

Next, in the Office Action, claims 1-6, 21-22, 35, 42-49, and 52 are rejected under 35 U.S.C. 102(b) as anticipated by US 4,388,375 to Hopper et al. ("Hopper"), claim 7 is rejected under 35 U.S.C. 103(a) as obvious over Hopper in view of US 6,065,457 to Aminaka ("Aminaka"), claims 8-16, 23-28, 42-47, and 50-51 are also rejected under 35 U.S.C. 103(a) as obvious over Hopper in view of Aminaka, and claims 17-18 and 29-34 are rejected under 35

U.S.C. 103(a) as obvious over Hopper in view of Aminaka and further in view of US 6,361,838 to Miyatake et al. ("Miyatake").

It is alleged in the Office Action that the polarizer of Hopper meets thickness and shrinkage requirements as defined in the present invention, so that the shrinkage force would inherently be as defined in the present invention.

Reconsideration and withdrawal of the rejection is respectfully requested. Hopper measures the shrinkage force of its PVA polarizing layer as a lamination with its specific PET substrate. Thus, Hopper focuses on using a stable substrate to which the polarizer layer is bonded, but Hopper is completely silent as to any attempt to control the shrinkage force of the polarizer alone.

Specifically, Hopper indicates that the PVA adhesive used for this lamination "should be able to bond the polyester to a film of polyvinyl alcohol so well that when a laminate of the coated polyester sheet and a sheet of polyvinyl alcohol is passed through a staining process to produce a polarizer and tested by subjecting it to an environment at 70°C at 95% humidity for 300 hours, the polyvinyl alcohol film should shrink only an insubstantial amount, for example 3% or less preferably less than 1.5% away from the polyester substrate" (Hopper at col. 5, lines 34-42). Thus, Hopper teaches that the shrinkage of its polyvinyl alcohol film is limited by using a strong adhesive and a stable substrate, not by controlling the shrinkage rate of its polyvinyl alcohol film.

In contrast, the present inventors focused on the shrinkage force of a polarizer taken alone, namely, the shrinkage force of a polarizer consisting essentially of a stretched hydrophilic polymer film, as recited in present claims 1 and 8, the shrinkage force of a polarizer consisting of a single layer film, as recited in present claim 22, and the shrinkage force of a polarizer prepared according

to the steps recited in present claim 42. Controlling the shrinkage force of such polarizer alone is completely different from considering the shrinkage force of a polarizer in a lamination with a substrate as in Hopper. Thus, in the present invention, as recited in present claims 1, 8, 22, and 42, the shrinkage rate of the polarizer is controlled so that the polarizer has a shrinkage force of at most 4.0 N/cm in an absorption axis direction, that shrinkage force being measured on the polarizer alone (i.e., without being laminated on a substrate).

An advantage of the presently claimed invention is that the shrinkage rate of a polarizer in hot and/or humid conditions can be markedly reduced. For example, the experimental results reported in Tables 1 and 2 on page 19 of the present specification show that a dimensional change rate of the polarizer alone in the absorption axis direction in the conditions of the test was only from 0.18% to 0.37% in Examples 1-4 (see Table 1, middle column) and that these values provided satisfactory color regularity, whereas the high shrinkage force in Comparative Examples 1-4 lead to increased shrinkage rate and increased color irregularity and discoloration. These values can be compared to the values indicated in Hopper, where the shrinkage rate of 3% or 1.5% for the polarizer (polyvinyl alcohol film), obtained by using a strong adhesive and a stable substrate, is considered satisfactory by Hopper. Even taking into account the different testing parameters, it is clear that the polarizer of Hopper taken alone has a much higher shrinkage force, since the shrinkage rate remains very high even after bonding to the specific substrate of Hopper.

In other words, the comparison of these exemplary shrinkage rates confirms that the polarizer of the present claims with the recited shrinkage force, and its advantages, are not taught or suggested in Hopper. Since the other cited references fail to remedy this deficiency of Hopper, the present claims are not obvious over Hopper taken alone or in any combination with the other

cited references.

In view of the above, it is submitted that the rejections should be withdrawn.

In conclusion, the invention as presently claimed is patentable. It is believed that the claims are in allowable condition and a notice to that effect is earnestly requested.

In the event there is, in the Examiner's opinion, any outstanding issue and such issue may be resolved by means of a telephone interview, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicants hereby petition for an appropriate extension of the response period. Please charge the fee for such extension and any other fees which may be required to our Deposit Account No. 50-2866.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP



Nicolas E. Seckel  
Attorney for Applicants  
Reg. No. 44,373

**Atty. Docket No. 020581**

**Customer No.: 38834**

1250 Connecticut Avenue NW Suite 700

Washington, D.C. 20036

Tel: (202) 822-1100

Fax: (202) 822-1111

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